

# APPENDIX LL - Utilities

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# Policy on High and Low Risk Underground Facilities Within Highway Rights of Way

– January 1997 –



STATE OF CALIFORNIA  
Department of Transportation  
Design and Local Programs Program



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## SECTION 1 - General Policy

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### 1-1 Policy Statement

The Department is responsible to provide a safe environment for the employees of both Caltrans and its contractors, as well as the traveling public. An important element of the safe environment is to provide a clear and safe right of way through the proper placement, protection, relocation, abandonment or removal of utility facilities that may pose a safety risk to the highway worker or user when the utility is excavated, cut or penetrated. Toward this end, Caltrans must establish and enforce mandatory standards and procedures for the placement and protection of underground utility facilities within highway rights of way and for the safe conduct of highway workers involved in maintenance or construction operations carried out in proximity to underground utility facilities.

This policy is applicable to the design phase of a project. For the construction phase, the contractor must follow applicable statutes, which require that all utilities be located and marked out on the ground by a regional notification center prior to any excavation. (Chapter 3.5 of Division 5 of the Government Code.)

### 1-2 Effective Date

This policy supersedes all previous instructions and policies concerning High and Low Risk underground facilities and is effective upon issuance.

### 1-3 General Responsibility

The District **Utility Coordinator** is responsible to coordinate the requirements of this policy with all underground facility owners, and must work with the Project Engineer in accomplishing the coordination.

The District **Permit Engineer** is responsible for enforcing the terms and conditions set forth in Section 8 of this policy.

The **Project Engineer** is responsible for the administration of the policy requirements specified herein, and must certify to the Office Engineer that the High and Low Risk policy has been met whenever submitting Plans, Specifications and Estimate for project advertisement. The Office Engineer will not list a project for advertisement until the project has been certified as meeting the High and Low Risk policy.

The District must work closely with any affected utility owners. A pre-design meeting must be held with the affected utility owners to discuss available alternatives to resolving any conflicts. It is important that the utility owners be consulted during project design and concerning any alternative selection that involves their utilities. Also, final design plans must be made available to the appropriate utility owners prior to advertisement of

the project, and a pre-construction meeting should be held with the affected utility owners.

#### **1-4 Deviation from Policy**

Any deviation from the requirements contained in this policy must be submitted by the Project Engineer to the Program Manager, Design and Local Programs Program (DLPP), for approval.

#### **1-5 Change in Policy**

All requests for change to requirements contained in this policy must be submitted to the DLPP Manager, Attention: High/Low Risk Exception.

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## **SECTION 2 - Definitions**

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### **2-1 High Risk Facilities**

Facilities conducting the following materials, whether encased or not, are considered to be High Risk facilities:

1. Petroleum products,
2. Oxygen,
3. Chlorine,
4. Toxic or flammable gases,
5. Natural gas in pipelines greater than 150 mm (6 inches) nominal pipe diameter, or pipelines with normal operating pressures greater than 415 kPa gauge (60 p.s.i.g.)
6. Underground electric supply lines, conductors or cables that have a potential to ground of more than 300 volts, either directly buried or in duct or conduit, which do not have concentric grounded or other effectively grounded metal shields or sheaths.

### **2-2 Low Risk Facilities**

Facilities conducting the following materials are considered to be Low Risk facilities:

1. Natural gas in pipelines 150 mm (6 inches) or smaller (nominal pipe diameter) with normal operating pressures of 415 kPa gauge (60 p.s.i.g.) or less.



2. Underground electric supply lines, conductors or cables with a potential to ground of more than 300 volts, either directly buried or in duct or conduit, which do have concentric grounded or other effectively grounded metal shields or sheaths, and for which the utility owner furnished location information in conformance with the requirements of Article 17.7, "Location Information" of General Order No. 128 of the California Public Utility Commission, or electrical underground conductors with a potential to ground of 300 volts or less.

## 2-3 Exempt Facilities

The following facilities are exempt from the requirements of this policy:

1. Natural gas service lines of 50 mm (2 inches) or less nominal pipe diameter and with normal operating pressures of 415 kPa gauge (60 p.s.i.g.) or less.
2. Underground electrical service conductors with a potential to ground of 300 volts or less.
3. Any electrical facility with a potential to ground of 50 volts or less.
4. State-owned electrical facilities operating at 300 volts or less potential to ground.

## 2-4 Other Definitions

***Access Control*** Full or partial restriction of the access of owners or occupants of abutting land to or from a highway.

***Approximate Location*** The "approximate location of subsurface installations" is defined in Section 4216 of the Government Code as a strip of land not more than 600 mm (24 inches) on either side of the exterior surface of the subsurface installation.

***Cable*** An insulated conductor, or combination of insulated conductors, enclosed in a sheath.

***Conductor*** A wire, or combination of wires not insulated from one another, suitable for carrying electric current.

***Conduit*** A pipe or tube in which smaller pipes, tubes, or electrical conductors are inserted.

<b><i>Construction Area</i></b>	Specifically identified work areas within a construction project in which <u>all</u> construction activities will take place. It is normally coincident with the overall project limits except where specifically set forth in the Project Plans.
<b><i>Department</i></b>	The Department of Transportation of the State of California, as created by law.
<b><i>District</i></b>	One of the twelve California Department of Transportation Districts, or in the case of a district that is tailored under a regional district for capital outlay support, the district having the delegated authority for performing the subject function.
<b><i>Duct</i></b>	A fabricated tube for receiving and containing conductors and cables.
<b><i>Electric Lines</i></b>	Underground conductors or cables with the conduit in which they are contained.
<b><i>Electronic Detector</i></b>	A device designed to detect underground utility facilities via electronic signals with sufficient accuracy to determine horizontal and vertical location.
<b><i>Encasement</i></b>	A sleeve or jacket.
<b><i>Encroachment</i></b>	A non-highway structure or object of any kind or character that is placed in, under, or over any portion of a highway.
<b><i>Excavation</i></b>	Any operation in which earth, rock, or other material in the ground is moved, removed, or otherwise displaced by means of tools, equipment, or explosives in any of the following ways: grading, trenching, digging, ditching, drilling, auguring, tunneling, scraping, cable or pipe plowing and driving, or any other way.
<b><i>Finished Grade</i></b>	Finished grade is the finished surface of the completed highway.
<b><i>Grading Plane</i></b>	The basement material surface upon which the lowest layer of sub-base, base, pavement, surfacing, or other specified layer, is placed, or the upper surface of the ground or earthwork in the absence of base, pavement, surfacing or other specified layer.
<b><i>Highway</i></b>	The entire width of the right of way of a highway, whether or not such entire area is used for highway purposes.

<b><i>Jacket</i></b>	An encasement of reinforced concrete poured around a pipeline or conduit.
<b><i>kPa</i></b>	KiloPascals gauge pressure. (Metric version of Pounds per Square Inch)
<b><i>Local Agency</i></b>	A city, county or other local public agency.
<b><i>Local Assistance Projects</i></b>	Local agency projects on local streets and roads involving either Federal-aid or State highway funds.
<b><i>Longitudinal</i></b>	A facility located parallel to and within highway right of way.
<b><i>Median</i></b>	That portion of a divided highway separating the traveled ways for traffic in opposite directions including inside shoulders.
<b><i>Owner</i></b>	The owner of the underground facility or its authorized agent.
<b><i>Pipeline</i></b>	A pipe used to transport liquids or gases.
<b><i>Positive Location Determination</i></b>	Determining the existence and location of a utility to within 150mm (0.5 foot) using any of the means listed in Section 4, or any combination of those means.
<b><i>Pothole</i></b>	An excavation to expose an underground facility.
<b><i>Probes</i></b>	Rods physically inserted in the ground to mechanically or electronically locate an underground facility without exposing the facility.
<b><i>Project Limits</i></b>	The entire right of way width lying within the project termini.
<b><i>P.S.I.G.</i></b>	Pounds per square inch gauge pressure. (Now to be stated in terms of kiloPascals.)
<b><i>Relocations</i></b>	The removal, rearrangement, reinstallation, or adjustment of a utility facility required by a transportation improvement project.
<b><i>Right of Way</i></b>	A general term for a strip of land, or rights in a strip of land, used for highway, public utility services, or other purposes. The right of way of a freeway includes any adjacent frontage road until such time as the frontage road is relinquished. Thereafter, the right of way line of the freeway is usually the access control line between the freeway and the frontage road.

<b><i>Roadbed</i></b>	That portion of the roadway extending from curb line to curb line or shoulder line to shoulder line. A divided highway is considered as including two separate roadbeds.
<b><i>Roadway</i></b>	That portion of the highway included between the outside lines of the sidewalks, or curbs, slopes, ditches, channels, waterways, and including all the appertaining structures, and other features necessary for proper drainage and protection.
<b><i>Service</i></b>	The portion of the electrical or gas system that connects a customer, usually at the meter location, to the utility distribution or supply system.
<b><i>Shoulders</i></b>	The portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of base and surface courses.
<b><i>Sleeve</i></b>	A pipe in which a pipeline or conduit is inserted.
<b><i>Special Funded Projects</i></b>	Those projects on the State Highway System that are locally sponsored through the use of local and/or private funds.
<b><i>Special Provisions</i></b>	The special provisions are specific clauses setting forth conditions or requirements peculiar to the work and supplementary to the Department's Standard Specifications.
<b><i>Transverse</i></b>	A facility passing from one side of the highway right of way to the other side of the highway right of way.

## SECTION 3 - Clearance Requirements for Construction Projects

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### 3-1 Existing Facilities On New Projects

Existing underground High and Low Risk facilities within the planned construction area must meet the following minimum clearances, or they must be protected in place or relocated in accordance with this policy:

### **High Risk Facilities**

1. 450 mm (18 inches) below the grading plane.
2. 300 mm (12 inches) below disturbed ground, and in areas of unsuitable material.
3. 300 mm (12 inches) below the grading plane of drainage structures.
4. 450 mm (18 inches) below flow line of unlined ditches.
5. 600 mm (24 inches) horizontally from face of pile or from side of excavation.

The above clearances are minimum safety margins for safe operation of equipment in proximity to High Risk facilities. The Project Engineer should verify their adequacy with the utility owners whenever heavy traffic loading is anticipated. When planned clearances are less than the above, the Project Engineer and district Utility Coordinator should work with the utility to determine methods to protect the facility or to have it relocated.

### **Low Risk Facilities**

Existing Low Risk facilities must clear proposed construction as determined by the Project Engineer, including determination of loading factors.

## **3-2 New and Relocated Facilities**

New or relocated High or Low Risk facilities within proposed new projects must meet the standards of Section 8.

## **3-3 Existing Facilities Not in Conflict With New Projects**

High and Low Risk facilities installed within conventional highway rights of way and facilities transversely installed in freeway rights of way prior to this policy and not in conflict with proposed construction may remain in place during their useful life.

High and Low Risk facilities longitudinally installed within freeway or expressway rights of way prior to this policy and not in conflict with proposed construction should be reviewed in context with current encroachment policy to determine if they should be relocated outside the controlled access right of way. If this review determines that the utilities can remain inside the rights of way, and is concurred in by the Design and Local Programs Program Manager, then they may remain in place during their useful life.

## SECTION 4 - Locating High and Low Risk Facilities

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### 4-1 Positive Location Requirements

Except as noted in Section 4-3, all High Risk facilities within the construction area must be positively located to within 150 mm (0.5 foot) for both horizontal and vertical location. The requirements shown below are minimums and additional determinations should be made if there is any question or doubt as to location.

#### Transverse Facilities

Location determinations for transverse facilities must be done:

1. On each side of an undivided highway
2. On each side and in the median of a divided highway. In the event that the utility or casing was originally placed by boring or jacking and is considered sufficiently rigid to have maintained direction throughout the installation, the location need not be determined in the median. For median determinations, Caltrans maintenance should be requested to furnish appropriate traffic control.

In no event should there be a spacing greater than 30 m (100 feet) between location determinations.

#### Longitudinal Facilities

Location determinations for longitudinal facilities must be done at intervals sufficient to establish the location of the line, but in no event greater than 30 m (100-foot) intervals as, defined in Section 4-2 below.

### 4-2 Methods of Positive Location

Positive location of all High or Low Risk facilities must be accomplished by potholing or other acceptable methods. Combinations of methods may be more effective than a single method. The **Project Engineer** is responsible for determining the methods of specifically identifying the facility and of locating the horizontal and vertical position. These determinations should be made after obtaining input from the utility owners and the District Utility Coordinator.

#### Pothole

Location by digging, or "potholing," to expose the facility is the preferred method to specifically identify the facility and to determine the precise horizontal and vertical position.

NOTE: Machine excavation to expose the high risk facility in order to physically locate it must be done by, or at the authorization of, the owner. Due to the potential State liability resulting from machine excavation around a High Risk facility, Caltrans employees should neither pothole the facility nor authorize others to pothole it, except by hand excavation and after obtaining written authorization of the owner.

### **Probe**

Locating facilities by probing is an acceptable method of determining the horizontal and vertical position of a facility. The owner may probe the facility at the required intervals with the addition of one or more potholes to ensure positive identification of the facility. The **Project Engineer** must determine the number and location of potholes and probes, after obtaining input from the utility owners and the District Utility Coordinator.

### **Electronic Detection**

Electronic detection for determining the horizontal and vertical location is acceptable when used in conjunction with potholing to ensure proper facility identification and to verify accuracy of electronic readings. Electronic detection is particularly effective for determining that the utility is outside the construction area or well below a prescribed depth. The **Project Engineer** is responsible for determining the number and frequency of the supplemental potholing and/or probing requirements, after obtaining input from the utility owners and the District Utility Coordinator.

### **As-Builts**

Utility facility "As-Builts" may be accepted only when signed by a responsible utility owner representative certifying as to the acceptable location accuracy of the installed facility, and verified by potholing or other positive locating methods at critical locations determined by the Project Engineer.

### **Other Acceptable Methods**

Other methods that will provide positive location of facilities may be used by the owner upon verification of the accuracy of the proposed method and approval of the **Project Engineer**. Such other methods should stand the tests of common sense, field measurements and good judgment.

## **4-3 Exceptions to Positive Location**

### **Facilities Outside Planned Excavation**

For High Risk facilities lying outside the identified construction area but within the project limits, and for all Low Risk facilities within the project limits, the approximate horizontal location must be determined within 600 mm (2 feet) of either side of the outside dimensions of the facility (required by Section 4216 of the Government Code).

High Risk facilities that have been determined by the owner to be more than 1.1 m (42 inches) below the lowest planned work, or more than 1.2 m (4 feet) horizontally from the side of the planned excavation, are considered to be outside of the construction area and do not require plotting of the facility elevation on the plans. The method and required accuracy to be used in locating the facility will depend on its proximity to the construction area.

Facilities that are at depths greater than 1.1 m (42 inches) below planned work must be horizontally plotted with a notation that "DEPTH EXCEEDS 1.1 m (42 INCHES) BELOW PLANNED WORK." The horizontal location of all High Risk and Low Risk facilities within the project limits must be plotted on the plans.

Where High and Low Risk utilities exist within the project limits but outside areas of planned excavation, the Obstructions Section of the project Special Provisions must call out such utilities by type, owner and location, and must caution the contractor that "no excavation may be made within 1.2m (4 feet) of these utilities unless and until such utilities have been positively located as to horizontal and vertical position".

### **Special Projects**

For the following types of projects, the vertical location of the facilities need not be included in the contract plans. Positive location will be performed during construction via the utility owner markout as required by Government Code Section 4215 et seq., and not prior to the PS&E. The basis for this exception is that any conflicts identified during the positive location activity may be resolved by adjusting the location of the proposed highway facility to miss the identified High Risk facility. The District **Utility Coordinator** must make the necessary arrangements to have the owner locate the facilities in conjunction with the contractor's operation and in accordance with the aforementioned Sections of the Government Code. The coordination for this work must be covered by special clauses in the Special Provisions for the contract. The special projects are:

1. Street lighting, traffic signal and ramp metering installations and similar projects where the boring, trenching or jacking operations are being made for electrical conduit runs only.

Note: If the project includes foundations for street lights, traffic signals or ramp meters, then it is not considered a special project -- it only qualifies as a special project if the only excavation is for the conduit runs.

2. Highway planting projects where the excavations are being made for plants and/or irrigation lines and appurtenances only.
3. Type 1 edge drain as shown on RSP-D981D1 when the maximum depth does not exceed 375 mm (15 inches).



### **Temporary Construction Signs**

Construction signs, when shown on the plans, will be cleared in the same manner as for any other construction feature requiring excavation. (Typical post hole depth is 1.7 m (5 1/2 feet).)

If the exact sign locations are not shown on the plans, post holes must be dug by hand except where potential conflicts can be eliminated by:

1. An appropriate Regional Notification Center has been contacted and they indicate there are no utility facilities in the area of the proposed post hole.
2. The Regional Notification Center has identified underground facilities but post holes can be dug in another acceptable location that has also been cleared; and it is mutually agreeable with the operator and the excavator.

NOTE: Standard Special Provision No. 12.00 must be included in all projects that include temporary construction signs.

## **4-4 Exempt Projects**

This policy does not apply to those projects where planned excavation is pavement removal only, is 150 mm (six inches) or less below existing ground level, or 300 mm (one foot) or less below existing road surface when trenching beneath existing pavement. Plans for such exempt projects must include a note on all plan sheets that states that "EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS".

## **4-5 Allowable Omissions**

If the Project Engineer wishes to omit utility facility plotting on plans, for portions of a project where planned excavation does not exceed 150 mm (0.5 foot), the following are required:

1. A note must be included on the plan sheets stating that "EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON PORTIONS OF THESE PLANS".
2. The plans must clearly show with bold labels those parts of the plans on which utility facilities have been omitted.

## **4-6 Authority To Approve Exceptions**

The **Project Engineer** is responsible for determining that the positive location requirements have been met, or that exception requirements for positive location, exempt projects, and allowable omissions have been complied with, and that the appropriate special provisions are used on a project. Approval must be obtained from the Design and Local Programs Program Manager for any deviation not meeting these exception requirements.

## SECTION 5 - Alternatives to Relocation

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### 5-1 Exposing During Construction

When approved by the Design and Local Programs Program (DLPP) Manager, High Risk facilities may be permitted to remain in limited critical areas, provided the owner agrees to fully expose the facility prior to work being done in close proximity. This determination must be made by the **Project Engineer** after consultation with the owner, but the determination must be made by the Project Engineer and not by the owner. These conditions must be fully explained in the contract Special Provisions.

### 5-2 Protection During Construction

When approved by the DLPP Manager, the **Project Engineer** has the option of protecting rather than relocating high risk facilities. The Project Engineer should discuss this option with the utility owner and the District Utility Coordinator prior to making the decision.

### 5-3 Special Contract Provisions

Facilities that can be adjusted during construction must be covered by special clauses in the Special Provisions that provide for the necessary coordination between the owner and the highway contractor. Approval by the DLPP Manager must be obtained whenever the clearance requirements of Section 3-1 or the exceptions of Section 4-3 are not met.

## SECTION 6 - Responsibilities

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### 6-1 Preparation of Plans

The preparation of contract plans and the delineation of underground facility information thereon will be the responsibility of the Unit (Design, Traffic, etc.) preparing the plans, specifications and estimates. See Chapter 4 of the *Drafting and Plans Manual* for preparation of the Utility Plan.

#### **High Risk Facilities**

Horizontal and vertical positions as required by Section 4 must be shown on or included in the contract plans.

### **Low Risk Facilities**

Horizontal alignment must be shown on or included in the contract plans. Elevations may be included, but are not required.

## **6-2 Surveying**

It is Caltrans' responsibility to tie utilities to the State's datum. The district's Survey Branch should establish the alignment and elevation of High Risk facilities, that are within the construction area, on the State's datum. This information is to be furnished for inclusion on the contract plans.

## **6-3 Decisions to Relocate, Adjust, or Protect**

The decision to relocate, adjust or protect High Risk facilities must be made by the **Project Engineer** after consultation with the owner and the District Utility Coordinator. The method of protection is subject to approval as a deviation by the Design and Local Programs Program Manager.

## **6-4 Contractor Notification Requirement**

Whenever underground facilities (including High and Low Risk facilities) are located within the limits of a project, Standard Special Provision No. 8.02 must be inserted in the Special Provisions (without deletion modifications) to require the contractor to notify the Resident Engineer and the Regional Notification Center when any excavation is to be performed.

The **Project Engineer** has the responsibility for including this requirement in the Special Provisions.

## **6-5 Certifying Policy Compliance**

The **Project Engineer** must certify that the facilities conform to the requirements of this policy, prior to listing of the project for advertisement. See Section 10 for guidelines and a sample format for the "Project Engineer's Certification of Utility Facilities".

## **6-6 Retention of Records**

The records of locations of existing, relocated or new installations under permits must be retained so the information may be recalled. The type of records maintained will be at the discretion of the district. Maintenance of records must be determined by the district, providing that any procedure adopted will allow for ready retrieval and permanent retention.

## SECTION 7 - Right of Way Procedures

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### 7-1 Identification

Facility identification, including categorization as High or Low Risk facilities, is a part of the preliminary phase of project development.

### 7-2 Notices

Owners of High Risk utility facilities are issued a "Notice To Owner" to positively locate their facilities by potholing, probing, or other acceptable method.

### 7-3 Financial Liability

Determination of the State's financial liability for work performed by an owner to comply with this policy will be made by Right of Way in accordance with applicable statutes and policies.

### 7-4 Expenditure Authorizations

The State's cost of work resulting from potholing and/or locating facilities as determined by Right of Way should be charged to a Phase 1 Expenditure Authorization (may be charged to Phase 0 on an exception basis with prior approval of the Right of Way Program).

Any required adjustment of facilities ordered by the State at State's liability should be charged to a Phase 9 or Phase 4 Expenditure Authorization, as appropriate.

## SECTION 8 - New Installations Under Encroachment Permit

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### 8-1 Installation Standards

The new installation of High and Low Risk facilities within existing or ultimate State Highway rights of way must be not less than 1.1 m (42 inches) below existing ground level. New installations in proposed projects must meet the following minimum clearances along the location of the utility facility:

1. 1.1 m (42 inches) below finished grade or 450 mm (18 inches) below grading plane of a currently planned project, whichever is greater.

2. 300 mm (12 inches) below existing or future drainage structures, but not less than in "1" above.
3. 750 mm (30 inches) below flow line of unlined ditches.
4. 600 mm (24 inches) horizontally from face of pile or side of excavation for a currently planned project.
5. 900mm (36 inches) below concrete sidewalks, where future street widening in the sidewalk area is not contemplated. This minimum may be reduced at the discretion of the utility owner, with the permission of the Permit or Project Engineer.

NOTE: All highway related facilities, such as signal and lighting conduits, that meet the definition of High and Low Risk facilities must meet these standards.

New installations within streets or frontage roads to be turned over to a local agency may be installed at lesser depths, as allowed by Public Utility Commission General Orders or normal procedures.

## **8-2 Permit Application**

For installation of High and Low Risk facilities, the owner must furnish a plan showing location and construction details with their application. Such plans are normally delivered to the Permit Engineer, then reviewed by the District Utility Coordinator, Design and other district functions.

## **8-3 Location Data**

Locations must be tied to points that are compatible with the State's datum for the area. If no datum exists, permanent reference points must be set so that the High and Low Risk facilities can be accurately located. This should be worked out with the utility owner, and if necessary may be performed by the District's Survey Unit.

## **8-4 Financial Liability**

The costs of conforming to the requirements of Section 8-1 through 8-4 should be borne by the facility owner.

## **8-5 Retention of Records**

Records of High and Low Risk facilities installed under permit must be retained so the information may be recalled. The type of records maintained will be at the discretion of the district. Maintenance of records must be determined by the district, providing that any procedure adopted will allow for ready retrieval and permanent retention.

## SECTION 9 - Local Agency Projects

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### 9-1 General

All Local Agency projects designed or administered by the State and all Special Funded State Highway projects must conform to the requirements of Section 1 through 6, inclusive.

For the purposes of this section, the term "**Project Engineer**" as used in this policy is the responsible engineer of the local agency.

A State administered project is any project that is advertised by the State, where the State opens bids and awards the contract and where the State pays the contractor directly.

### 9-2 Certifying Policy Compliance

On State administered local projects, or any Local Agency prepared project on the State Highway System (Special Funded), the local agency must certify to the State that the High Risk facilities conform to the requirements of this policy.

On Federally aided Local Streets and Roads projects, the State, as a part of its certification, must certify that the agency has been made aware of this policy.

### 9-3 Financial Liability

Reimbursement of utility owners for work associated with positively locating and/or relocating facilities for local street and road projects should be in accordance with local agency's normal procedures. Reimbursement for these costs on State projects must follow Caltrans procedures.

The cost of surveying and mapping of high risk facilities should be borne by the local agency in the same manner as its other plan preparation costs.

## SECTION 10 - Project Engineer's Certification

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### 10-1 Guidelines

Any project that involves High or Low Risk utilities will not be advertised by the Office Engineer until there is a "Project Engineer's Certification of Utility Facilities" in the

PS&E file. On the Certification, each High and Low Risk utility is to be listed, and its description and disposition must include:

1. Horizontal and vertical location in relation to the work area (accuracy, as appropriate)
2. Size and type of material transmitted
3. Pressure or voltage of High and Low Risk facilities
4. Disposition of facility:
  - Remain in place
  - Relocated
  - Expose prior to construction
  - Expose during construction
  - Protect during construction
  - Etc.

## **10-2 Certification & Sample Form**

The "Project Engineer's Certification of Utility Facilities" is a mandatory attachment to the PS&E submittal. A sample form is provided on the following page.

**Project Engineer's Certification**  
Of Utility Facilities  
on

\_\_\_\_\_

[Dist-Co-Rte-KP(PM)]

\_\_\_\_\_

(EA)

\_\_\_\_\_

(description)

Within Construction  
Area?

yes\*

no

----- REQUIRED INFORMATION -----

High Risk Facilities (list, describe with location, and disposition):

_____		
_____		
_____		
_____		
_____		

Low Risk Facilities (list, describe with location, and disposition):

_____		
_____		
_____		
_____		
_____		

\* (All High and Low Risk Utilities within the construction area must be positively identified.)

----- OPTIONAL INFORMATION -----

Other Utility Facilities (list, describe w/location, and disposition):

_____		
_____		
_____		
_____		
_____		

*I hereby certify that the above listed facilities are located within the project limits and that this project conforms to the Policy on High and Low Risk Underground Facilities:*

\_\_\_\_\_

(PROJECT ENGINEER)

\_\_\_\_\_

(DATE)

\_\_\_\_\_

(ENGINEER'S SEAL)